IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.(Currently Amended) An optical disk system comprising:

at least one photo detector for detecting at least a part of said optical disk and in response generating detection signals;

at least one variable gain amplifier for amplifying detection signals and forming amplified detection signals;

at least one slicer for slicing the amplified detection signals to form a sliced output by comparing the amplified detection signals with a reference signal; ~~and~~

at least one generator in a feedback path between said at least one slicer and said at least one variable gain amplifier for controlling said at least one variable gain amplifier non-linearly; wherein said at least one generator comprises two converters interconnected with two connections, and at least one capacitor connected between the two connections; and

a differential time delay detector configured to receive the sliced output and a further signal and to detect any time delay between the sliced output and the further signal.

Claims 2-3 (Canceled)

4.(Currently Amended) An optical disk system comprising:

at least one photo detector for detecting at least a part of said optical disk and in response generating detection signals;

at least one variable gain amplifier for amplifying the detection signals and forming amplified detection signals;

at least one slicer for slicing the amplified detection signals to form a sliced output by comparing the amplified detection signals with a reference signal; ~~and~~

at least one generator in a feedback path between said at least one slicer and said at least one variable gain amplifier for controlling said at least one variable gain amplifier non-linearly;

wherein said at least one photo detector comprises at least four subdetectors, with said optical disk system comprising per subdetector a variable gain amplifier, a slicer and two converters with a capacitor; and

a differential time delay detector configured to receive the sliced output and a further signal and to detect any time delay between the sliced output and the further signal.

5. (Currently Amended) A circuit for amplifying and slicing detection signals originating from at least one photo detector in an optical disk system and comprising:

at least one variable gain amplifier for amplifying detection signals and forming amplified detection signals;

at least one slicer for slicing the amplified detection signals to form a sliced output by comparing the amplified detection signals with a reference signal; ~~and~~

at least one generator in a feedback path between said at least one slicer and said at least one variable gain amplifier for controlling said at least one variable gain amplifier non-linearly; and

a differential time delay detector configured to receive the sliced output and a further signal and to detect any time delay between the sliced output and the further signal;

wherein said at least one generator comprises two converters interconnected with two connections, and at least one capacitor

connected between the two connections.

Claims 6-7 (Canceled)

8.(Currently Amended) A method for use in an optical disk system and comprising the acts of:

detecting at least a part of said optical disk via at least one photo detector and in response generating detection signals;

amplifying the detection signals via at least one variable gain amplifier to form amplified detection signals;

slicing the amplified detection signals via at least one slicer to form a sliced output by comparing the amplified detection signals with a reference signal; ~~and~~

controlling said at least one variable gain amplifier non-linearly via at least one generator located in a feedback path between said at least one slicer and said at least one variable gain amplifier; and

detecting any time delay between the sliced output and a further signal of a differential time delay detector;

wherein said at least one generator comprises two converters interconnected with two connections, and at least one capacitor

connected between the two connections.

Claims 9-10 (Canceled)

11. (Previously Presented) The optical disk system of claim 1, wherein said at least one photo detector comprises at least four subdetectors, with said optical disk system comprising, per subdetector a variable gain amplifier, a slicer and two converters with a capacitor.

12. (Currently Amended) The optical disk system of claim 1, wherein said ~~two converters are configured to convert voltages into currents.~~ differential time delay detector includes latches, an adder or a subtracter, and a low pass filter

13. (Previously Presented) The optical disk system of claim 4, wherein said two converters are interconnected with two connections, and said capacitor is connected between the two connections.

14. (Currently Amended) The optical disk system of claim 4,

wherein said ~~two converters are configured to convert voltages into currents~~ differential time delay detector includes latches, an adder or a subtracter, and a low pass filter.

15. (Previously Presented) The circuit of claim 5, wherein said at least one photo detector comprises at least four subdetectors, with said optical disk system comprising, per subdetector a variable gain amplifier, a slicer and two converters with a capacitor.

16. (Currently Amended) The circuit of claim 5, wherein said ~~two converters are configured to convert voltages into currents~~ differential time delay detector includes latches, an adder or a subtracter, and a low pass filter.

17. (Previously Presented) The method of claim 8, wherein said at least one photo detector comprises at least four subdetectors, with said optical disk system comprising, per subdetector a variable gain amplifier, a slicer and two converters with a capacitor.

18. (Currently Amended) The method of claim 8, wherein said ~~two converters are configured to convert voltages into currents~~ differential time delay detector includes a latch, an adder or a subtracter, and a low pass filter.

19. (Currently Amended) A circuit for amplifying and slicing detection signals originating from at least one photo detector in an optical disk system and comprising:

at least one variable gain amplifier for amplifying the detection signals and forming amplified detection signals;

at least one slicer for slicing the amplified detection signals to form a sliced output by comparing the amplified detection signals with a reference signal; ~~and~~

at least one generator in a feedback path between said at least one slicer and said at least one variable gain amplifier for controlling said at least one variable gain amplifier non-linearly; and

a differential time delay detector configured to receive the sliced output and a further signal and to detect any time delay between the sliced output and the further signal;

wherein said at least one photo detector comprises at least

four subdetectors, with said optical disk system comprising per subdetector a variable gain amplifier, a slicer and two converters with a capacitor.

20. (Previously Presented) The circuit of claim 15, wherein said two converters are interconnected with two connections, and said capacitor is connected between the two connections.

21. (Previously Presented) The circuit of claim 15, wherein said two converters are configured to convert voltages into currents.

22. (Currently Amended) A method for use in an optical disk system and comprising the acts of:

detecting at least a part of said optical disk via at least one photo detector and in response generating detection signals;

amplifying the detection signals via at least one variable gain amplifier to form amplified detection signals;

slicing the amplified detection signals via at least one slicer to form a sliced output by comparing the amplified detection signals with a reference signal; ~~and~~

controlling said at least one variable gain amplifier non-linearly via at least one generator located in a feedback path between said at least one slicer and said at least one variable gain amplifier; and

detecting any time delay between the sliced output and a further signal of a differential time delay detector;

wherein said at least one photo detector comprises at least four subdetectors, with said optical disk system comprising per subdetector a variable gain amplifier, a slicer and two converters with a capacitor.

23.(Previously Presented) The method of claim 17, wherein said two converters are interconnected with two connections, and said capacitor is connected between the two connections.

24.(Previously Presented) The method of claim 17, wherein said two converters are configured to convert voltages into currents.